(*E*). In this way the total of fifty-six sets of four sixes for 36 is obtained.

The remainder of the work begins with the comparison of such of the thirty-one sets for 36 with each of the fifty-six sets for 29. Although in upwards of forty cases one obtains consistent sets of eight sixes, all of these cases fail at the trial with the sets for 22, showing that the problem is impossible.

PROBLEMS FOR SOLUTION.

ALGEBRA.

283. Proposed by G. B. M. ZERR, A. M., Ph. D., Parsons, W. Va.

Solve $w+x+y+z=4a$, $w^2+x^2+y^2+z^2=4a^2+4b^2$, $w^3+x^3+y^3+z^3=4a^3+12ab^2$, $w^4+x^4+y^4+z^4=4a^4+4b^4+4c^4+24a^2b^2$.

GEOMETRY.

316. Proposed by J. STEWART GIBSON, Department of Physics, Wadleigh High School, New York City.

Determine the locus of the vertices of parabolas described by particles thrown off from the circumference of a uniformly revolving wheel.

CALCULUS.

239. Proposed by L. H. MacDONALD, A. M., Ph. D., Sometime Tutor in the University of Cambridge, Jersey City, N. J.

Of all triangles inscribed in a circle, find that which has the greatest perimeter.

MECHANICS.

202. Proposed by W. J. GREENSTREET, M. A., Editor of The Mathematical Gazette, Stroud, England.

Three equal, uniform, similar rods AB, BC, CD, freely jointed at B and C, are hung from a point by two equal strings attached at A and D. Find the position of equilibrium.

MISCELLANEOUS.

171. Proposed by W. J. GREENSTREET, M. A., Editor of The Mathematical Gazette, Stroud, England.

If $\underset{x=a}{\text{Lim.}} \frac{\phi(x)}{\psi(x)}=\lambda$, show $\underset{x=a}{\text{Lim.}} \left[\frac{\lambda}{\phi(x)}-\frac{1}{\psi(x)}\right]=\frac{\lambda\psi''(a)-\phi''(a)}{2\phi'(a)\psi'(a)}$.

ERRATA.

Page 97, line 10. Vol. XIII, for $x=y=w=$ etc., read $x=x_1=x_2=$ etc.
Page 98, line 1, for $G+D+U$ read $G+D+U+B$, B taken from table.
Page 97, in table add .008 to each number from 34 to 43 inclusive.